Claims

1. A layer on a substrate, which contains an organic, transparent, electrically conductive material, characterized in that the layer has a preferred orientation.

2. The layer according to claim 1, characterized in that the material is a polymer.

3. The layer according to claim 2, characterized in that the polymer is a doped polymer.

4. The layer according to claim 3, characterized in that the doped polymer is a mixture of a polymer, which is from the group including polythiophenes, polyacetylenes, polypyrroles, polyanilines, and the like, and at least one polyanion, which is preferably comprised of organic compounds containing di- and polyhydroxy- and/or carboxylic acid- or sulfonic acid groups, and particularly preferably, polyanions comprised of polycarboxylic acids or polysulfonic acids.

5. The layer according to claim 4, characterized in that the doped polymer is polyethylene dioxythiophene polystyrene sulfonate (PEDT/PSS).

6. The layer according to claim 2 or 3, characterized in that the polymer has been produced by means of photopolymerization.

7. The layer according to claim 6, characterized in that the polymer is photo-oriented.

8. The layer according to one of claims 2 to 6, characterized in that the polymer was modified in such a way that it became photo-cross-linkable and was then photo-cross-linked.

9. The layer according to claim 8, characterized in that the polymer has been modified by means of photo-cross-linkable substituents.

10. The layer according to claim 8 or 9, characterized in that the polymer is photo-oriented.

11. The layer according to claim 10, characterized in that the polymer was modified by means of photo-cross-linkable substituents, which induce a privileged direction when irradiated with linearly polarized light, and was then cross-linked and photo-oriented by means of at least one irradiation with polarized light.

12. The layer according to one of claims 1 to 11, characterized in that it also contains a bonding agent.

13. The layer according to claim 12, characterized in that the bonding agent is a polymer that is cross-linked by means of irradiation.

14. The layer according to claim 12 or 13, characterized in that the bonding agent is photo-oriented.

15. The layer according to claim 14, characterized in that the bonding agent is a polymer, which is anisotropically cross-linked by irradiation with linearly polarized light.

16. The layer according to one of claims 1 to 15, characterized in that the layer constitutes a pattern of layer segments.

17. The layer according to one of claims 1 to 5 and 12, characterized in that the conductivity in the layer is selectively nullified.

18. A method for producing a layer, in particular according to one of claims 1 to 17, in which an organic, electrically conductive, transparent layer is produced on a substrate, characterized in that the layer is oriented.

19. The method according to claim 18, characterized in that a layer, which contains a transparent, electrically conductive material, is produced on the substrate.

20. The method according to claim 19, characterized in that a polymer is used as this material.

21. The method according to claim 20, characterized in that the starting material for the polymer is polymerized in the presence of at least one compound, which is capable of anion formation, and one oxidation agent.

22. The method according to claim 21, characterized in that a mixture is brought to reaction, which contains a monomer selected from the groups including thiophenes, polyacetylenes, polypyrroles, polyanilines, and the like, at least one organic compound containing di- and polyhydroxy- and/or carboxylic acid- or sulfonic acid groups, preferably at least one polycarboxylic acid or one polysulfonic acid, and an oxidation agent.

23. The method according to claim 20, characterized in that the starting material for the polymer is polymerized by irradiation.

24. The method according to claim 23, characterized in that the starting material for the polymer polymerizes, forming a privileged direction, when irradiated with linearly polarized light.

25. The method according to one of claims 20 to 23, characterized in that the conductive polymer is modified with photo-cross-linkable substituents and is then cross-linked by irradiation.

26. The method according to claim 25, characterized in that the doped polymer is modified with photo-cross-linkable substituents, which anisotropically cross-link when irradiated with linearly polarized light, and is then cross-linked by at least one irradiation with linearly polarized light.

27. The method according to one of claims 18 to 26, characterized in that the starting material for the layer has a bonding agent or the starting material for such a bonding agent added to it.

28. The method according to claim 27, characterized in that a photo-cross-linkable polymer is used as a starting material for the bonding agent.

29. The method according to claim 28, characterized in that a photo-cross-linkable polymer is used as the starting material for the bonding agent and this polymer anisotropically cross-links when irradiated with linearly polarized.

30. The method according to one of claims 18 to 23, 25, 27, and 28, characterized in that the layer is oriented by means of friction.

31. The method according to one of claims 18 to 30, characterized in that the layer, possibly at the same time as the photo-polymerization or the photo-cross-linking and possibly the photo-orientation, is photolithographically structured by means of selective etching.

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32. The method according to one of claims 18 to 22, 26 and 29, characterized in that the conductivity in the layer is selectively nullified photolithographically by means of an oxidation agent.

33. A use of the layer according to one of claims 1 to 17 or the layer produced according to one of claims 18 to 32 as a combined electrode- and orientation layer in LC displays.